

ABSTRACT OF THE DISCLOSURE

A water-based polymer drilling fluid, containing effective quantities of surfactants having HLB numbers equal to or greater than approximately 7, emulsifies oil and bitumen contained in oil sand cuttings, resulting in the oil and bitumen being dispersed into the mud as an emulsion. This eliminates or significantly reduces the ability of the oil, bitumen, and cuttings to clog the well or stick to drill string components when drilling a well through oil-bearing sands, particularly sands containing highly viscous oil or bitumen. The emulsification process separates the sand particles from the oil and bitumen, such that the sand particles can be removed when the mud is run through a conventional shale shaker or other suitable apparatus.